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## **CLAIMS**

- 1. A touch probe (10,50) comprising:
  a probe body (12,52) housing first locating
  elements (23,58);
- a stylus holder (16,54) having second locating elements (24,57) which co-operate with the first locating elements to locate the stylus holder within the probe body; and
- a bias (36,68,86) to urge the first and second locating elements into contact, characterised in that; an element (35,50,76,90) is provided to damp motion between the probe body and the stylus holder.
- 2. A touch probe according to claim 1 wherein the element (35,50,76,90) slows a relative movement between the first and second locating elements.
- 3. A touch probe according to claim 2 wherein the element (35,50,76,90) slows the relative movement by resisting the urging of the bias.
- A touch probe according to any preceding claim wherein the element (35,50,76,90) is slidably mounted
   with respect to one of the probe head and stylus holder.
  - 5. A touch probe according to claim 4 wherein the element (35,76) is slidably mounted with respect to both the probe head and stylus holder.
    - 6. A touch probe according to claim 4 wherein the element (90) is rotatably mounted with respect to one of the probe head and stylus holder.

WO 2004/025215 PCT/GB2003/003863

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- 7. A touch probe according to claim 1 wherein the element (50) absorbs energy produced by a relative movement between the probe body and stylus holder.
- 5 8. A touch probe according to claim 7 wherein the element is lossy.
- A touch probe according to claim 8 wherein the element includes at least two materials and at least
   one of which is lossy.
  - 10. A touch probe according to claim 9 wherein a lossy material is carbon powder.

A touch probe according to any preceding claim

- 15 11. A touch probe according to claim 10 wherein, between 10 and 120 pph of carbon powder is used.
- wherein, the first locating elements each comprise a pair of balls (23) which form a v-shaped seat and the second locating elements each comprise a roller (24) which supports the stylus holder (16) on the v-shaped seat.
- 25 13. A touch probe according to any of claims 1 to 11 wherein, the first locating elements each comprise a ball (58) and the second locating elements each comprise a v shaped groove (57) which partially houses a ball and is supported thereon.